1. (currently amended) A method of controlling the distribution of traffic flow in a load-sharing redundancy group comprising a first gateway device and a second gateway device configured to which forward packets sent from hosts, the method comprising:

assigning a first plurality of forwarding addresses to the first gateway device;
assigning a second plurality of forwarding addresses to the second gateway device;
distributing forwarding addresses to hosts to use in sending packets to the redundancy group;

the hosts sending packets using the distributed forwarding addresses;

measuring the traffic flow for each of the assigned forwarding addresses;

comparing the measured traffic flow to a target traffic flow; and

adjusting the traffic flow by changing allocation of the forwarding addresses.

- 2. (currently amended) The method of Claim 1 wherein each forwarding address is a [[MAC]] Media Access Control (MAC) address.
- 3. (currently amended) The method of Claim 2 wherein each MAC address is a [[vMAC]] virtual Media Access Control (vMAC) address.
- 4. (original) The method of Claim 1 wherein adjusting the traffic flow comprises altering the distribution of forwarding addresses to hosts.
- 5. (currently amended) The method of Claim 4 wherein altering the distribution of forwarding addresses to hosts comprises replying to [[ARP]] Address Resolution Protocol (ARP) inquiries from hosts using the forwarding address having the lowest measured traffic flow on the gateway device having the lowest measured traffic flow.

App No. 10/632,704

Atty Docket: CISCP329/6641

- 6. (original) The method of Claim 1 wherein adjusting the traffic flow comprises re-assigning a forwarding address to a different gateway device.
- 7. (original) The method of Claim 1 wherein the first gateway device is a first router and the second gateway device is a second router.
- 8. (currently amended) The method of Claim 1 wherein the <u>load-sharing</u> redundancy group is configured to provide provides failover services in the event that one of the gateway devices ceases operation.
- 9. (original) The method of Claim 1 wherein the target traffic flow is equal distribution of traffic across the first gateway device and the second gateway device and further wherein adjusting the traffic flow comprises adjusting the traffic flow across the first gateway device and the second gateway device to more equally distribute the measured traffic flow between the first gateway device and the second gateway device.
- 10. (currently amended) A method of controlling traffic flow in a load-sharing redundancy group comprising a first gateway device and a second gateway device eonfigured to which forward packets sent from hosts, the method comprising:

assigning a first address set to the first gateway device, wherein the first address set comprises a plurality of forwarding addresses, further wherein the first gateway device is eonfigured to forward forwards packets sent by hosts and addressed to forwarding addresses in the first address set;

assigning a second address set to the second gateway device, wherein the second address set comprises a plurality forwarding addresses, further wherein the second gateway device is configured to forward forwards packets sent by hosts and addressed to forwarding addresses in the second address set;

App No. 10/632,704

Atty Docket: CISCP329/6641

measuring the traffic flow to each forwarding address;

adjusting the measured traffic flow using one of the forwarding addresses in one of the assigned forwarding address sets by changing allocation of the forwarding addresses.

- 11. (original) The method of Claim 10 wherein adjusting the traffic flow comprises instructing a host to use the assigned forwarding address having the lowest measured traffic flow on the gateway device having the lowest measured traffic flow.
- 12. (currently amended) The method of Claim 10 wherein the forwarding addresses are [[vMAC]] <u>virtual Media Access Control (vMAC)</u> addresses.
- 13. (original) The method of Claim 10 wherein the first gateway device is a first router and the second gateway device is a second router.
- 14. (original) The method of Claim 10 wherein adjusting the traffic flow comprises re-assigning one of the forwarding addresses from the first address set to the second address set.
- 15. (currently amended) A computer program product comprising:

a machine readable medium; and

encoded with program instructions contained in the machine readable medium executable by a computer, the program instructions specifying a method of controlling traffic flow in a load-sharing redundancy group comprising a first gateway device and a second gateway device configured to which forward packets from hosts, the method comprising:

assigning a first plurality of forwarding addresses to the first gateway device; assigning a second plurality of forwarding addresses to the second gateway device;

the redundancy group distributing forwarding addresses to hosts to use in sending packets to the redundancy group;

the hosts sending packets using the distributed forwarding addresses;
measuring the traffic flow for each of the assigned forwarding addresses;
comparing the measured traffic flow to a target traffic flow; and
adjusting the traffic flow by changing allocation of the forwarding addresses.

- 16. (currently amended) The computer program product readable medium of Claim 15 wherein the load-sharing redundancy group implements Cisco [[GLBP]] Gateway Load Balancing Protocol (GLBP) and further wherein the first gateway device is a first router and the second gateway device is a second router.
- 17. (currently amended) The computer program product readable medium of Claim 15 wherein each forwarding address is a [[MAC]] Media Access Control (MAC) address.
- 18. (currently amended) The computer program product readable medium of Claim 17 wherein each [[MAC]] Media Access Control (MAC) address is a [[vMAC]] virtual Media Access Control (vMAC) address.
- 19. (currently amended) The computer program product readable medium of Claim 15 wherein adjusting the traffic flow comprises altering the distribution of forwarding addresses to hosts.
- 20. (currently amended) The computer program product readable medium of Claim 19 wherein altering the distribution of forwarding addresses to hosts comprises replying to [[ARP]] Address Resolution Protocol (ARP) inquiries from hosts using the forwarding address having the lowest measured traffic flow on the gateway device having the lowest measured traffic flow.

App No. 10/632,704

- 21. (currently amended) The computer program product readable medium of Claim 15 wherein adjusting the traffic flow comprises re-assigning a forwarding address to a different gateway device.
- 22. (currently amended) The computer program product readable medium of Claim 15 wherein the <u>load-sharing</u> redundancy group is configured to provide provides failover services in the event that one of the gateway devices ceases operation.
- 23. (currently amended) The computer program product readable medium of Claim 15 wherein the target traffic flow is equal distribution of traffic across the first gateway device and the second gateway device and further wherein adjusting the traffic flow comprises adjusting the traffic flow across the first gateway device and the second gateway device to more equally distribute the measured traffic flow between the first gateway device and the second gateway device.
- 24. (currently amended) An apparatus for controlling traffic flow in a load-sharing redundancy group comprising a first gateway device and a second gateway device configured to which forward packets sent from hosts, the apparatus comprising:

means for assigning a first plurality of forwarding addresses to the first gateway device;

means for assigning a second plurality of forwarding addresses to the second gateway

device;

means for distributing forwarding addresses to hosts to use in sending packets to the redundancy group;

means for having the hosts sending packets using the distributed forwarding addresses;
means for measuring the traffic flow for each of the assigned forwarding addresses;
means for comparing the measured traffic flow to a target traffic flow; and

means for adjusting the traffic flow by changing allocation of the forwarding addresses.

25. (original) The apparatus of Claim 24 wherein the means for adjusting the traffic flow comprises means for altering the distribution of forwarding addresses to hosts.

26. (currently amended) The apparatus of Claim 25 wherein the means for altering the distribution of forwarding addresses to hosts comprises means for replying to [[ARP]] Address Resolution Protocol (ARP) inquiries from hosts using the forwarding address having the lowest measured traffic flow on the gateway device having the lowest measured traffic flow.

27. (original) The apparatus of Claim 24 wherein the means for adjusting the traffic flow comprises means for re-assigning a forwarding address to a different gateway device.

28. (currently amended) The apparatus of Claim 24 wherein the <u>load-sharing</u> redundancy group is configured to provide provides failover services in the event that one of the gateway devices ceases operation.

29. (original) The apparatus of Claim 24 wherein the target traffic flow is equal distribution of traffic across the first gateway device and the second gateway device and further wherein the means for adjusting the traffic flow comprises means for adjusting the traffic flow across the first gateway device and the second gateway device to more equally distribute the measured traffic flow between the first gateway device and the second gateway device.

30. (currently amended) A primary gateway device configured to control traffic flow in a load-sharing redundancy group comprising the primary gateway device and a second gateway device configured to which forward packets sent from hosts, the gateway device comprising:

one or more processors;

a memory in communication with at least one of the processors, wherein at least one of the processors and the memory are configured to:

assign a first plurality of forwarding addresses to the primary gateway device;
assign a second plurality of forwarding addresses to the second gateway device;
distribute forwarding addresses to hosts to use in sending packets to the
redundancy group;

send packets using the forwarding addresses distributed to the primary gateway device;

measure the traffic flow for each of the assigned forwarding addresses in the primary gateway device and the second gateway device;

compare the measured traffic flow to a target traffic flow; and adjust the traffic flow by changing allocation of the forwarding addresses.

- 31. (currently amended) The primary gateway device of Claim 30 wherein each forwarding address is a [[MAC]] Media Access Control (MAC) address.
- 32. (currently amended) The primary gateway device of Claim 31 wherein each [[MAC]] Media Access Control (MAC) address is a [[vMAC]] virtual Media Access Control (vMAC) address.
- 33. (original) The primary gateway device of Claim 30 wherein adjusting the traffic flow comprises altering the distribution of forwarding addresses to hosts.
- 34. (currently amended) The primary gateway device of Claim 33 wherein altering the distribution of forwarding addresses to hosts comprises replying to [[ARP]] Address Resolution

NO. 385 P. 12-

<u>Protocol (ARP)</u> inquiries from hosts using the forwarding address having the lowest measured traffic flow on the gateway device having the lowest measured traffic flow.

35. (original) The primary gateway device of Claim 30 wherein adjusting the traffic flow comprises re-assigning a forwarding address to a different gateway device.

36. (original) The primary gateway device of Claim 30 wherein the primary gateway device is a first router and the second gateway device is a second router.

37. (currently amended) The primary gateway device of Claim 30 wherein the <u>load-sharing</u> redundancy group is configured to provide provides failover services in the event that one of the gateway devices ceases operation.

38. (original) The primary gateway device of Claim 30 wherein the target traffic flow is equal distribution of traffic across the primary gateway device and the second gateway device and further wherein adjusting the traffic flow comprises adjusting the traffic flow across the primary gateway device and the second gateway device to more equally distribute the measured traffic flow between the primary gateway device and the second gateway device.

39. (currently amended) A primary gateway device configured to control traffic flow in a load-sharing redundancy group comprising the primary gateway device and a second gateway device eonfigured to which forward packets sent from hosts, the gateway device comprising:

one or more processors;

a memory in communication with at least one of the processors, wherein at least one of the processors and the memory are configured to:

assign a first address set to the primary gateway device, wherein the first address set comprises a plurality of forwarding addresses, further wherein the primary

gateway device is configured to forward forwards packets sent by hosts and addressed to forwarding addresses in the first address set;

assign a second address set to the second gateway device, wherein the second address set comprises a plurality forwarding addresses, further wherein the second gateway device is configured to forward forwards packets sent by hosts and addressed to forwarding addresses in the second address set;

measure the traffic flow to each forwarding address; and

adjust the measured traffic flow using one of the forwarding addresses in one of the assigned forwarding address sets by changing allocation of the forwarding addresses.

- 40. (currently amended) The primary gateway device of Claim 39 wherein adjusting the traffic flow comprises instructing a host to use [[a]] the assigned forwarding address having the lowest measured traffic flow on the gateway device having the lowest measured traffic flow.
- 41. (currently amended) The primary gateway device of Claim 39 wherein the forwarding addresses are [[vMAC]] virtual Media Access Control (vMAC) addresses.
- 42. (original) The primary gateway device of Claim 39 wherein the primary gateway device is a first router and the second gateway device is a second router.
- 43. (original) The primary gateway device of Claim 39 wherein adjusting the traffic flow comprises re-assigning one of the forwarding addresses from the first address set to the second address set.